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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,287	03/21/2001	Vladislav Vashchenko	75292/10417	6106

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EXAMINER

PRENTY, MARK V

ART UNIT	PAPER NUMBER
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2822

DATE MAILED: 01/09/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/816,287

Applicant(s)
VASHCHENKO et al.

Examiner
Prenty

Art Unit
2822



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Dec 18, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above, claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4, 17, and 18 is/are allowed.
- 6) ☒ Claim(s) 5-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

This Office Action is in response to the amendment filed September 3, 2002 and the election filed December 18, 2002.

Applicants' election of Group II, claims 4-18, is acknowledged. Because the applicants did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse. See MPEP §818.03(a).

Claims 1-3 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Claims 5-16 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 is incorrect in that "The device of Claim 2" should read "The method of Claim 4" (note that claim 5 repeats the limitation of claim 2 and that claim 6 reads "The method of Claim 5").

Claim 6 depends on claim 5 and is thus similarly incorrect.

Independent claim 7 is indefinite in reciting "a holding voltage substantially the same as a GGNMOS but supporting current densities that are at least twice as high for a GGNMOS of substantially the same holding voltage," because "a GGNMOS" (and thus any characteristic thereof) is an indefinite reference point.

Independent claim 7 is further indefinite in reciting "having a p+ emitter that is sufficiently reduced in size ... to increase the holding voltage to the desired level," because "the desired level" is indefinite (as per the immediately preceding paragraph).

Independent claim 8 is indefinite in reciting "a holding voltage substantially the same as a GGNMOS but supporting current densities that are at least twice as high for

a GGNMOS of substantially the same holding voltage," because "a GGNMOS" (and thus any characteristic thereof) is an indefinite reference point.

Independent claim 8 is further indefinite in reciting "having a p+ emitter that is reduced in size below a predetermined value and having an n+ emitter that is increased in size ... to increase the holding voltage to the desired level," because "the desired level" is indefinite (as per the immediately preceding paragraph).

Independent claim 8 is also indefinite in reciting a p+ emitter "that is reduced in size below a predetermined value" (i.e., "a predetermined value" is indefinite).

Independent claim 9 is indefinite in reciting a method of providing a device "having a higher holding voltage than a LVTSCR and supporting a higher current than a GGNMOS," because "a LVTSCR" and "a GGNMOS" (and thus any characteristics thereof) are indefinite reference points.

Independent claim 9 is further indefinite in reciting "having a p+ emitter that is sufficiently reduced in size so as to increase the holding voltage to the desired level," because "a desired level" is indefinite (as per the immediately preceding paragraph).

Independent claim 10 is indefinite in reciting a method of providing a device "having a higher holding voltage than a LVTSCR and supporting a higher current than a GGNMOS," because "a LVTSCR" and "a GGNMOS" (and thus any characteristics thereof) are indefinite reference points.

Independent claim 10 is further indefinite in reciting "having a p+ emitter that is reduced in size below a predetermined value and having an n+ emitter that is increased in size ... to increase the holding voltage to the desired level," because "the desired level" is indefinite (as per the immediately preceding paragraph).

Independent claim 10 is also indefinite in reciting a p+ emitter "that is reduced in

size below a predetermined value" (i.e., "a predetermined value" is indefinite).

Independent claim 11 is indefinite in reciting a method of creating "an ESD protection structure having a higher holding voltage than a conventional LVTSCR," because "a conventional LVTSCR" (and thus the holding voltage thereof) is an indefinite reference point.

Independent claim 11 is further indefinite because "the p+ emitter" lacks antecedent basis.

Claim 12 depends on claim 11 and is thus similarly indefinite.

Dependent claim 12 is further indefinite in reciting "using TCAD simulations to determine a p+ emitter size corresponding to a desired holding voltage," because "a desired holding voltage" is indefinite (as per the preceding discussion of independent claim 11).

Independent claim 13 is indefinite in reciting a method of creating "an ESD protection structure that supports a higher current than a conventional GGNMOS device," because "a conventional GGNMOS device" (and thus the current thereof) is an indefinite reference point.

Independent claim 13 is further indefinite because "the p+ emitter" lacks antecedent basis.

Claim 14 depends on claim 13 and is thus similarly indefinite.

Dependent claim 14 is further indefinite in reciting "using TCAD simulations to determine a p+ emitter size corresponding to a desired current," because "a desired current" is indefinite (as per the preceding discussion of independent claim 13).

Independent claim 15 is indefinite because "the p+ emitter" lacks antecedent basis.

Claim 16 depends on independent claim 15 and is thus similarly indefinite.

Claim 16 is further indefinite because "the n+ emitter" lacks antecedent basis.

Claim 7, at least insofar as understood, is rejected under 35 U.S.C. §102 as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Prior Art Fig. 1. Note SCR 100.

Claims 8-16, at least insofar as understood, are rejected under 35 U.S.C. §102 as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Prior Art Fig. 2. Note LVTSCR 200.

Claims 4, 17 and 18 are allowable over the prior art of record.

Vashchenko et al. (US Patent 6,433,368) is relevant to this application.

Applicants' arguments filed September 3, 2002 with respect to the rejection of claims 4-10 under 35 U.S.C. §112, second paragraph, are persuasive with respect to independent claim 4, but are unpersuasive with respect to independent claims 7-10, particularly given the further explanation of the rejection of those claims.

Applicants' arguments filed September 3, 2002 with respect to the rejection of claims 7-10 under 35 U.S.C. §102 or 35 U.S.C. §103 in view of Prior Art Figs. 1 and 2 fall with the applicants' unpersuasive arguments with respect to the rejection of those claims under 35 U.S.C. §112, second paragraph.

Applicants' amendment filed September 3, 2002 necessitated the new grounds of rejection. Accordingly, THIS ACTION IS MADE FINAL. See M.P.E.P. §706.07(a). Applicant is reminded of the extension of time policy set forth in 37 C.F.R. §1.136(a).

Applicants' reply to the final rejection must include cancellation of, or appeal from the rejections of, each rejected claim (i.e., the applicants' reply to the final rejection must include cancellation of, or appeal from

the rejections of, claims 7-16¹). 37 CFR 1.113.

An amendment filed under 37 CFR 1.116 should cancel finally rejected claims 7-16 and withdrawn claims 1-3, amend claim 5 as discussed above, and not add any claims, so that the application can be allowed with the allowed claims consisting of claims 4-6, 17 and 18.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. §1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Registered practitioners can telephone examiner Prenty at (703) 308-4939. Any voicemail message left for the examiner must include the name and registration number of the registered practitioner calling, and the application's Serial Number. Technology Center 2800's general telephone number is (703) 308-0956.

Mark Prenty
Mark V. Prenty
Primary Examiner
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¹ Claims 5 and 6 depend on allowed independent claim 4 and thus stand on different footing than claims 7-16.